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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,039	03/23/2004	David H. Meikrantz	B-424	5651

7590 11/06/2006
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EXAMINER

VANOY, TIMOTHY C

ART UNIT PAPER NUMBER

1754

DATE MAILED: 11/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/808,039	Applicant(s) MEIKRANTZ ET AL.	
	Examiner Timothy C. Vanoy	Art Unit 1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
4a) Of the above claim(s) 1-20 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 43 is/are allowed.
- 6) ☒ Claim(s) 21-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-43 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12 July 2006</u> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 21-43 in the reply filed on Oct. 24, 2006 is acknowledged.

Claims 1-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on Oct. 24, 2006.

Information Disclosure Statement

The information disclosure statement filed on Mar. 23, 2004 does not fully comply with the requirements of 37 CFR 1.98(b) because the literature reference authored by ZIRNHELT et al. is missing. Since the submission appears to be *bona fide*, applicant is given **ONE (1) MONTH** from the date of this notice to supply the above mentioned omissions or corrections in the information disclosure statement. **NO EXTENSION OF THIS TIME LIMIT MAY BE GRANTED UNDER EITHER 37 CFR 1.136(a) OR (b).** Failure to timely comply with this notice will result in the above mentioned information disclosure statement being placed in the application file with the noncomplying information **not** being considered. See 37 CFR 1.97(i).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The person having ordinary skill in the art has the capability of understanding the scientific and engineering principles applicable to the claimed invention. The references of record in this application reasonably reflect this level of skill.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 21-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the article titled "Development of a Solvent Extraction Process for Cesium Removal from SRS Tank Waste" by Ralph A. Leonard et al. in view of the article titled "Extraction

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of Lead and Strontium from Hazardous Waste Streams by Solvent Extraction with 4', 4', (5')-Di-(t-Butyldicyclohexo)-18-Crown-6" by Donald J. Wood et al.

The Leonard et al. article describes the removal of cesium from solutions via contact with calyx[4]arene-bis(tert-octylbenzo-crown-6) (i. e. "BoBCalixC6") along with a modifier, such as 1-(1,1,2,2-tetrafluoroethoxy)-3-[4-(tert-octylphenoxy)-2-propanol (i. e. Cs-3): please see the paragraph bridging pgs. 744 and 745 in this Leonard et al. article.

The difference between the applicants' claims and the Leonard et al. article is that the applicants' claims also call for the removal of strontium with a liquid comprising 4',4',(5')-di-(t-butyldicyclo-hexano)-18-crown-6.

The abstract of the Wood et al. article describes the use a liquid comprising 4',4',(5')-di-(t-butyldicyclo-hexano)-18-crown-6 to extract strontium from a liquid.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the process described in the Leonard et al. article by including the 4',4',(5')-di-(t-butyldicyclo-hexano)-18-crown-6 taught in the abstract of the Wood et al. article into the extraction solvent of the Leonard et al. article because of the expected advantage of extracting strontium. Please note that the courts have already determined that the selection of a known material based on its suitability for its intended purpose supported a *prima facie* obviousness determination in *Sinclair & Carroll Co. vs. Interchemical Corp.* 325 U. S. 327, 65 USPQ 297 (1945) discussed in section 2144.07 in the MPEP 8th Ed. Rev. 3 Aug. 2005. In this case, the "intended purpose" is the extraction of strontium (as taught in the Wood et al. article and required by the applicants' claims) and the "known material" is the 4',4',(5')-di-(t-butyldicyclo-

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hexano)-18-crown-6 (as taught in the Wood et al. article and required in the applicants' claims).

Claim 43 has not been rejected under either 35USC102 or 35USC103 because there is no suggestion in the references of record to modify the process described in the Wood et al. article cited and applied in the 35USC103 rejection by including 1-(2,2,3,3-tetrafluoropropoxy)-3-(4-sec-butylphenoxy)-2-propanol in the extraction solvent of the Wood et al.

The following references are made of record:

U. S. Patent 6,214,234 B1 disclosing a method for the removal of cesium from radioactive waste liquids, and

U. S. Patent 5,100,585 disclosing a process for the recovery of strontium from acid solutions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy C. Vanoy whose telephone number is 571-272-8158. The examiner can normally be reached on Mon-Fri 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Timothy C Vanoy
Timothy C Vanoy
Primary Examiner
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tv